

**UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

KAIFI LLC,

Plaintiff,

v.

VERIZON COMMUNICATIONS INC., et al,

Defendants.

Case No. 2:20-CV-280-JRG

JURY TRIAL DEMANDED

Honorable Rodney Gilstrap

REPLY CLAIM CONSTRUCTION BRIEF BY KAIFI LLC

I. TERM A: “selecting one of the indoor and the outdoor networks in accordance with the determined location of the data communication terminal”

KAIFI’s Proposed Construction	Verizon’s Original Construction	Verizon’s New Construction
No additional construction needed	“selecting one of the indoor and outdoor networks based on the determined location stored in the location register of the data communication terminal”	“selecting one of the indoor and outdoor networks based on the determined location of the data communication terminal, which is stored in the location register.”

Verizon’s brief offers an entirely new construction that was absent from all previous claim construction disclosures required under the Patent Local Rules. Verizon attempts to gloss over its violation of the rules by claiming it has merely “clarified” its original construction and that KAIFI “misunderstood” the meaning of the original construction. This is lawyer puffery. The original construction required that the location register be present on the data communication terminal. KAIFI pointed out in its opening brief that there are embodiments in which the location register can be present on the terminal, but this was not the only option. KAIFI pointed out that Verizon’s construction showed the arbitrary nature of T-Mobile’s and Verizon’s attempts at claim redrafting: T-Mobile requires the location register to be *away* from the terminal while Verizon requires the location register to be *on* the terminal. T-Mobile Case, Dkt. 124 (KAIFI Reply Claim Construction Brief) at 1. It was only after this that Verizon abandoned its original claim construction.

Verizon’s new construction is no less improper. It can be boiled down to the following improper limitations: location *must be* determined by the location register; the “determined location” of the data communication terminal (as opposed to just “location information”) *must be* stored in the location register; only the determined location can be involved in the decision to switch network paths.

A. Verizon's Construction Is Inconsistent With The Claim Language

Claim 1 states that the location register “stores location information.” It does not state that the location register stores a “determined location” of the data communication terminal. Claim 1 covers an implementation where location information (that is locational area or indoor system ID information or both) are stored in the location register but then exported to a router which “determines the location of the data communication terminal” based on the location information.

The inventor of the '728 Patent knew how to describe additional requirements for the location register when intended. For example, Claim 12 requires that the location register participate in authentication.

a third step of going through authentication of an indoor location of the data communication terminal by the location register and storing the indoor location into the location register

'728 Patent, Claim 12. Claim 1 places no additional requirements on the location register beyond storing location information.

B. Verizon's Construction Is Inconsistent With The Specification

The specification makes clear that the determination of location can be made by structures other than the location register. For example, in certain embodiments it is the terminal itself that “determine[s]” it is within a specific indoor network based on the system ID received from the network:

In order to determine whether the wireless internet terminal is located indoors or outdoors, the wireless internet terminal determines whether ID information of an indoor system broadcasted from the indoor gateway is received, and in particular, whether the received ID information of the indoor system is equal to the stored ID information. '728 Patent at 3:16-22.

See also '728 Patent at 11:39-47 (The PDA “compares” indoor system ID information with the stored indoor network ID information and “determines” whether the PDA can access the

network); '728 Patent at 12:61-64 (the PDA “determines whether the received indoor system ID information is identical to the stored (registered) indoor system ID information”).

Verizon states that “[t]he specification is also unequivocal that the ‘router’ receives ‘location information’ from the ‘location register’ ...” Dkt. 57, Verizon Responsive Claim Construction Brief (“Resp. Br.”) at 4. But, critically, the specification nowhere states that the location register must store a “determined location.” None of Verizon’s cites show the requirement of a specific place for storing a “determined location.” For example, Verizon points to 2:34-38 (“network paths ... are switched *depending on* whether a user is located indoors or outdoors”) and 2:49-51.2 (“a roaming service is provided through an optimal network path *depending on* whether the user is located indoors or outdoors.”), but neither of those state anything about where a “determined location” is stored. Verizon’s construction is merely an attempt to insert an additional requirement into Claim 1 – the unsupported requirement that a “determined location” must be stored in the location register.

Finally, the specification makes clear that switching decisions “in accordance with the determined location” encompasses more than making a decision based solely on the presence or absence of an indoor or outdoor network. For example, switching can occur when the device is in range of both the indoor and outdoor network, but the indoor network is in an abnormal condition. “[I]n accordance with the determined location” encompasses instances in which a determination is made that the terminal is in the range of an indoor network that is in abnormal operation (a location determination) and therefore the decision is made to switch to an available outdoor network. This is described as yielding communication “without interruption,” which is what the Court determined the claims required. AT&T Case, Dkt. 104 at p. 9-10.

automatically switching the connection to the outdoor mobile communication network when the indoor network is in an abnormal condition or the indoor

network cannot be used upon incoming of a call. '728 Patent at 11:1-6; *see also id.* at 12:6-13.

Therefore, according to the present invention, the switching of connection between communication networks is made only when the quality of the indoor network is better than that of the outdoor network after it is checked whether the quality of the indoor network is worse than that of the outdoor network. To this end, in the present invention, the data communication quality of the indoor network is estimated by using a loss rate of IP Datagram, an error rate of IP Datagram, an operating characteristics of a retransmission timer, average delay and variance, and the like so that the communication qualities between the indoor and outdoor networks are compared. *Id.* at 12:33-44.

C. Verizon's Construction Is Inconsistent With The Korean Application

Nothing in the sections of the Korean Application cited by Verizon prevents the router from taking the raw location information stored in the location register and using it to determine a location of the terminal – *i.e.*, making the determination “according to” the location information. Indeed, the portion of the Korean application relied on by Verizon recites “[a] router *for judging* the location of the data communication terminal...” Resp. Br. at 6 *citing* Dkt. 57-2 (“Korean App.”)(emphasis added). The router is doing the judging, based on data from the location register. The outcome of that judging is a “determined location,” which can be stored in the router and then used to make switching decisions.

Moreover, the Korean Application discloses that the “location checker (internet switchboard) for *determining*” accesses data that is “stored in the location register.” Korean App. at ¶30 (emphasis added). In other words, the determination of location is something that is performed after location information is stored in the location register.

The Korean Application also describes embodiments in which the PDA determines location: “The PDA (10) compares the received indoor system ID and the stored indoor network ID, and if these match, *determines* that the user has moved indoor” *Id.* at ¶89 (emphasis added); accord, ¶107.

The Korean Application also makes clear that switching in accordance with the location of the device can involve information other than simply whether the device is in the range of the network: “the HA location register judges that there is an abnormality in the indoor network . . . or that the amount of calls in the indoor network has increased heavily (S18), it uses a different outdoor mobile communication network.” *Id.* at ¶97; accord, ¶99 (switching when the “indoor network experiences abnormalities during an incoming call or when the indoor network is not available.”); ¶116; ¶117 (“the present invention checks whether the quality of the indoor network is worse than the quality of the outdoor network”); ¶146.

D. KAIFI’s Briefing And Declarations Do Not Support Verizon’s Construction

KAIFI’s arguments in its §101 briefing and Dr. Kelley’s declaration do not support Verizon’s position. KAIFI’s brief states: “Once the system (specifically, the fourth recited component, **a router alone or in combination with other equipment such as the user device**) **determines** that the terminal has moved from outdoors to indoors based on the updated location information...” Resp. Br. at 7. Likewise, Dr. Kelley stated: “[the location register] stores location information transmitted from the data communication terminal which is used to determine whether the terminal is indoors or outdoors.” *Id.* at 8. Neither of these statements exclude the embodiment in which the router (either alone or in combination with other equipment) receives “location information” from the location register, calculates a “determined location” based on said “location information,” and then stores that “determined location” locally. In this embodiment the “determined location” does not have to be stored in the location register. Nothing in KAIFI’s §101 briefing or Dr. Kelley’s declaration suggests otherwise.

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Respectfully submitted,

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CERTIFICATE OF SERVICE

I certify that the foregoing document was filed electronically on May 26, 2021 pursuant to Local Rule CV-5(a) and has been served on all counsel who have consented to electronic service.

/s/ Robert Christopher Bunt

Robert Christopher Bunt